

Brookhaven Women in Science

Promoting Women, Advancing Science



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Brookhaven National Laboratory

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Brookhaven Women in Science

Mission

Brookhaven Women in Science (BWIS) is a diverse and inclusive community that promotes equal opportunity and advancement for all women in support of world-class science.

Brookhaven Women in Science

An organization started in 1979 for all and women who:

- * Contribute to and/or support science and technology at BNL
- * Recognize that helping women advance the laboratory is beneficial to everyone and everything at BNL
- * Support programs that encourage women to enter scientific fields

Financially supported by BSA (Brookhaven Science Associates) and small annual membership fee

Became a 501(c)(3) non-profit in 1984

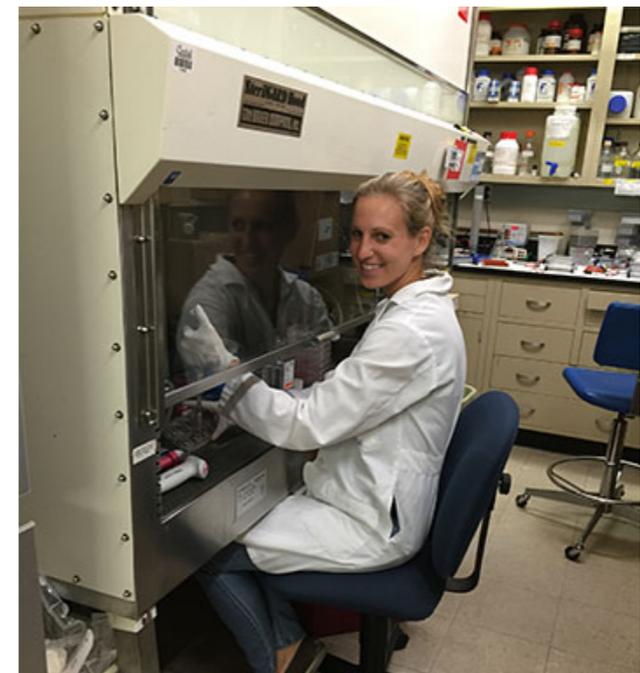
- Exempt from Federal income tax
- Donors can deduct their contribution

BWIS and Diversity Climate at BNL

- Initiated APS site visits to assess BNL's climate for women
 - Brookhaven Lab APS Task Force to develop lab wide action plan
 - The APS Committee on the Status of Women is also trying to help women deal with hurdles in their careers through a series of workshops on communication and negotiation skills

BWIS Outreach

- **BWIS Colloquia Series** presented by prominent female scientists or lectures of interest since 1980
- Annual **Career Day** for female high school students since 1981
- **CARE Workshops** for young researchers 2012-2015
- **BERA Summer Camp Science Fair** since 2016
- **Partnerships**
 - WISE and GWISE at SUNY Stony Brook - International Women's Day
 - Enterprising & Professional Women - New York State – Equal Pay Day
 - Long Island Physics Teachers Association
 - Suffolk County Community College
 - Peconic Bay ZONTA



BWIS - Colloquium Series

- BWIS promotes women speakers through its Lecture Series
- One of the outcome was that women speakers are increasingly invited to present their research at BNL
- Interdisciplinary Established in career and at the beginning of career

LIGO and the Beginning of Gravitational Wave Astronomy

4:30 PM, Thursday
September 22, 2016

Brookhaven National Laboratory
Physics Department
Large Seminar Room
Building 510

Dr. Jessica McIver
Postdoctoral Scholar
California Institute of Technology

Dr. Jess McIver is a postdoctoral scholar in experimental physics at Caltech. She grew up near Schenectady, New York, and earned degrees in physics and magazine journalism from Syracuse University. She graduated with a Ph.D. in physics from the University of Massachusetts Amherst in 2015 and wrote her dissertation on detecting gravitational waves with Advanced LIGO. She was based at the LIGO-Livingston detector in Louisiana at the time of the recent gravitational wave discoveries, and works on the interface between LIGO experiment instrumentation and astrophysical gravitational wave data analysis.



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The lecture is free and open to the public. Visitors age 16 and over must bring a photo ID. Sponsored by Brookhaven Women in Science.



Chasing the Secrets of Ghostly Neutrinos

4:00 PM, Thursday
July 14, 2016

Brookhaven National Laboratory
Physics Department
Small Seminar Room
Building 510

Sowjanya Gollapinni
Assistant Professor of Physics
University of Tennessee, Knoxville

Sowjanya recently accepted position as Assistant Professor of Physics at University of Tennessee. She did her masters and doctorate from Wayne State University in 2012 and doing her post-doctoral work at Kansas State. She has been part of CMS, MicroBooNE, SBND and DUNE collaborations. Her research interests mainly include high energy physics with post-doctoral work focused on neutrino physics. She is also involved in many outreach activities at Fermilab and is interested to nurture STEM enthusiasm in kids.

Sowjanya will be talking about elusive particles to understand the biggest puzzles in the universe, from the structure of the atom to the formation of a star. Come for an hour to be mesmerized by the scientific adventures in the wonderful world of neutrinos and how they can help us unlock some of the deepest secrets of the universe.



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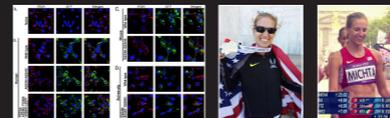
Dream, Believe, Become

4:30 PM, Thursday
December 8, 2016

Physics Large Seminar Room
Building 510A
Brookhaven National Laboratory

Dr. Maria Michta-Coffey
Suffolk County Community College

Dr. Maria Michta microbiologist and Olympic race walker will talk about her life's journey as a student, academic, and athlete. Ever since she was a child, Dr. Michta's dream was to become an Olympic athlete. She started race walking as a freshman at Sachem High School, eventually making it to the London and Rio Olympics. Maria applies the same discipline, belief, and motivation to her training as an athlete as she applies to her professional life as an academic. She was recently presented with the Suffolk County Distinguished Service Medal – making her only the 21st person to receive the distinction since 1973. A role model in the community and volunteer coach Dr. Michta will talk on what it takes to become a scientist and an athlete.



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NATIONAL LABORATORY

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What Makes Humans Special?: Insights from Non-Human Primates

4:30 PM, Thursday
June 13th, 2017

Brookhaven National Laboratory
Physics Department, Bldg 510, Large Seminar Room

Laurie Santos
Yale University

Why are humans the only species that reads fiction, tells jokes, and shares photos on Instagram? In her talk, psychologist Dr. Laurie Santos will explore this question of human uniqueness by examining what makes the human mind so different from that of other animals. Dr. Santos is an expert on human cognition, its origins, and the evolutionary biases that influence our all-too-imperfect life choices. Director of the Comparative Cognition Laboratory Dr. Santos received numerous awards for science, teaching, and mentorship. Her scientific research is widely published and has been featured in numerous media outlets such as The New York Times, NPR and NOVA.



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BROOKHAVEN
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BWIS - International Women Day

- Since 2014, being celebrated every year
- Aligned to the UN theme with focus on Science
- Structure
 - Talks - career, science, quality of life
 - Panel discussions (very diverse panels; high school students to well established professionals) academic, industry, government
 - Diverse constituency - this year include male panel

Success lead to extension of the program from half day to full day this year!



Talks



Panel Discussions



Networking



BWIS - High School Career Day

- High School students from different school districts spend a day at exploring the lab, meeting lab professionals and learning about career possibilities in STEM
- High School Career Day is a valuable way to show young women that there is a place for them if they should choose to pursue work in the STEM fields

29 March, 2017

Supports Girls in Science by organizing Science Summer Camps at BNL



BWIS - Awards Focussed on Women Scientists

Gertrude Scharff-Goldhaber Prize (Since 1995)

The Gertrude S. Goldhaber Prize (\$1000)has been established to honor Gertrude Scharff-Goldhaber for her outstanding contributions in the field of nuclear physics, and also for her support of women in science, and to recognize substantial promise and accomplishment by a woman graduate student in physics.



Renate W Chasman Scholarship (Since 1986)

Named after Renate Chasman, a renowned physicist who worked at Brookhaven, the \$1,000 scholarship is awarded each year to a woman who are undergraduate seniors or gradate students doing research at BNL in the STEM disciplines (i.e, in science, engineering, or mathematics).



Gertrude Scharff-Goldhaber Prize

July 17 1992

First Goldhaber Prize Awarded

Xiaodong Zhang, a BNL guest junior research associate who has just completed her third year as a physics graduate student at the State University of New York at Stony Brook, has been selected by Brookhaven Women in Science (BWIS) as the first winner of the new Gertrude S. Goldhaber Prize in physics.

Zhang was nominated for the \$500 prize by Janos Kirz, a professor of physics at Stony Brook who conducts research at BNL's National Synchrotron Light Source (NSLS) on x-ray microscopy, a technique for producing images of biological specimens. Zhang began working with Kirz's NSLS group after completing her first year of graduate school. As Kirz wrote, "It took her very little time to learn enough to become an important contributor."

Among Zhang's accomplishments, Kirz cited the deconvolution of the



Roger Stoutenburgh

Xiaodong Zhang at x-ray microscopy beam line X1A, at the NSLS.

First Gertrude S. Goldhaber Prize Presented

Oct. 1st 1992



Roger Stoutenburgh

Xiaodong Zhang (left), a graduate student in physics at the State University of New York at Stony Brook and a guest junior research associate at BNL, was awarded the first \$500 Gertrude S. Goldhaber Prize in Physics on October 1.

Presented by Brookhaven Women in Science (BWIS), the award honors Gertrude Scharff-Goldhaber (second from right). Now a collaborator in the Physics Department, the noted nuclear physicist was a founding member of BWIS and has long been a champion of education and opportunities for women in science. She was also the first woman Ph.D. to be hired at Brookhaven, when she and her husband, former BNL Director Maurice Goldhaber (right), AUI Distinguished Scientist emeritus, came to the Lab in 1950.

Their son, Alfred Goldhaber (second from left), is with Stony Brook's Physics Department. He presented the award to Zhang just before she gave a seminar on her research in scanning soft x-ray microscopy.



Gertrude Scharff-Goldhaber Prize

year	name	affiliation	year	name	affiliation
2017	Anna Gura	SBU	2003	Carola Berger	SBU
2016	Kathryn Meehan	UC Davis	2002	Yiing-Rei Chen	SBU
2015	Fen Guan	SBU	2001	Jane Burward-H	SBU
2014	Li Yi	Purdue	2001	Irina Moroz	SBU
2013	Sara Callori	SBU	2001	Rebecca Christianson	MIT
2012	Marija Kotur	SBU	2000	Y. S. J. Yaman	SBU
2011	Megan Connors	SBU	1999	Angelika Osanna	SBU
2010	Johanna Nelson	SBU	1998	Shan-Ho Tsai	SBU
2009	Na Li	SBU	1998	Mary Josephine Bellanca	SBU
2008	Christine Nattrass	SBU	1997	N.N.	N.N.
2007	Manuela Kuhl	SBU	1996	Q. Joan Harris	MIT
2006	Enju Jiang	SBU	1995	N.N.	N.N.
2005	Christina Koles	SBU	1994	Fang Shu	SBU
2004	Anna Lerotic	SBU	1993	N.N.	N.N.
2003	Lilia Anguelova	SBU	1992	Xiaodong Zhang	SBU

Still in academia: $\geq 74\%$; in tenure (track) position: $\geq 54\%$

Gertrude Scharff-Goldhaber Prize



BWIS - Quality of Life Initiatives

Federal credit union at BNL in 1982 as a result of a BWIS proposal to ensure equal credit opportunity for all Laboratory employees and facility-users.

BNL parental leave in 1988, permitting both women and men employees to take up to three months of leave following the birth or adoption of a child, due to BWIS's efforts to extend the ability to take maternity leave to male employee

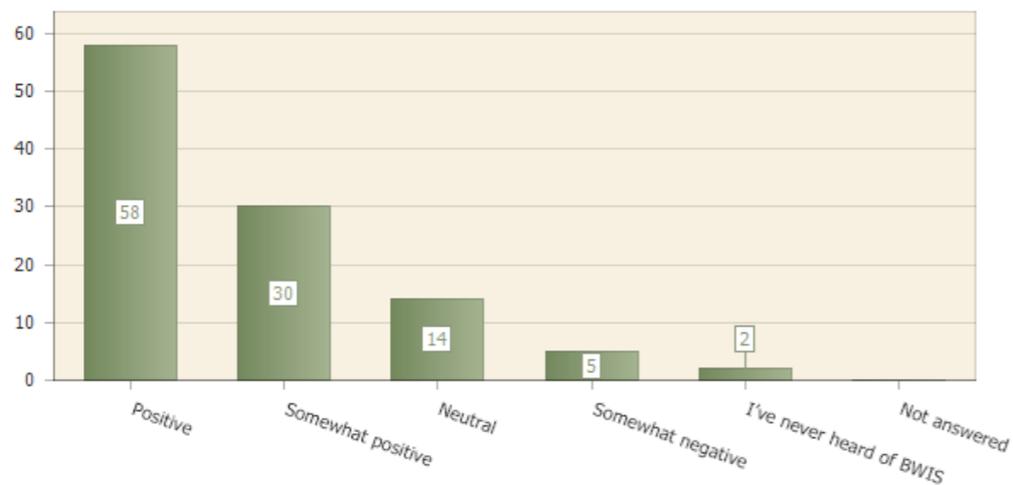
Child Development Center in 1990, the first to be built on a DOE facility, as a result of BWIS initiated day-care center studies.

BWIS - Other Initiatives

- Action on retention problem at BNL
 - Working with HR and Lab Management
 - Proposed solutions:
 - Recruit more women
 - Provide them equal opportunities
 - Take their career aspirations seriously
 - Gender-neutral retention: bias against women should not be allowed.
- Annual Wine & Cheese Event, Super Salad Networking Lunch and other networking seminars
- Workshop on “Creating Inclusive Workplaces: Seeing and Blocking Bias” with Caroline Simard
- Membership drives

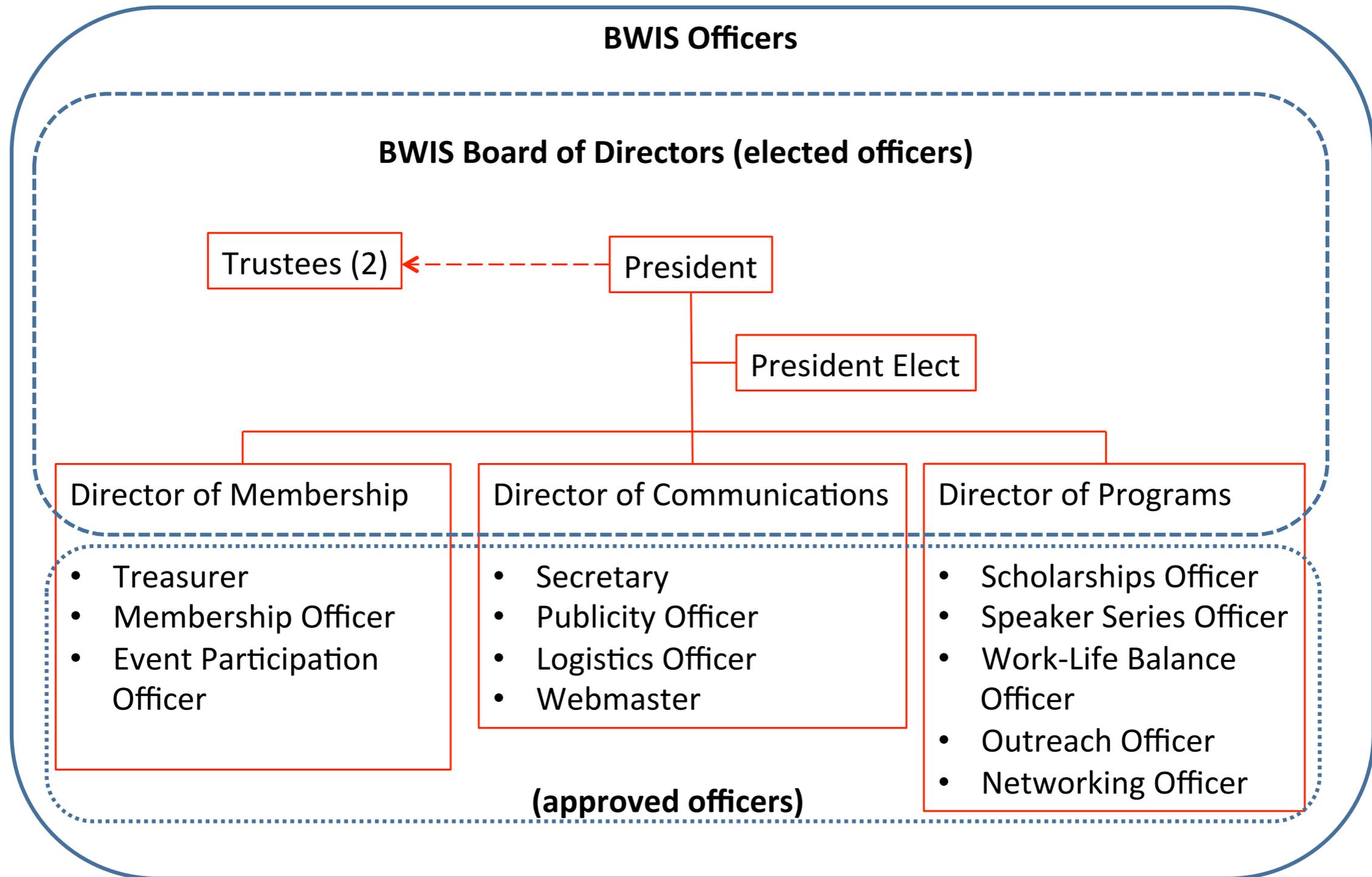
BWIS - Survey 2017 Labwide

Initiative	BWIS should pursue it		I volunteer!	
	Count	Percentage	Count	Percentage
Career advancement/professional development for all women	62	66.0%	23	39.0%
Pay equality	58	61.7%	17	28.8%
Networking within BNL	50	53.2%	17	28.8%
Community outreach (high school career day, BERA summer camp science fair, other)	50	53.2%	23	39.0%
Work-life balance	48	51.1%	15	25.4%
Diversity and inclusion climate at BNL	47	50.0%	15	25.4%
Career advancement for women in STEM	43	45.7%	15	25.4%
Scientific talks by female speakers	41	43.6%	11	18.6%
Increasing diversity at BNL	41	43.6%	15	25.4%
Child care center quality and affordability	40	42.6%	7	11.9%
Networking outside of BNL	38	40.4%	11	18.6%
Harassment and hostile work environments	38	40.4%	12	20.3%



Positive	Negative
Important cause	Not taken seriously around the lab
Good for networking	“Window dressing” for lab leadership
Interesting, worthwhile events	Lacks mission/mission not clear
Focus on good issues at the Lab	Not inclusive enough/ Too inclusive
Positive legacy (i.e. CDC)	Not well coordinated/advertised

BWIS - New Organization Chart



BWIS - Working Towards our Mission

- * BWIS has a long and distinguished history of assisting women at BNL
- * BWIS organize many outreach and networking events to promote science and inculcate interest of students in STEM fields
- * Workforce diversity is still a challenging issue

BWIS Webpage: <https://www.bnl.gov/bwis/>

Members: People affiliated with BNL/BSA

Affiliate Members: Anyone sympathetic to the objectives of the organization

Thanks!

